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ABSTRACT

Two experiments involving three learning disabled children (8 and 12 years old) investigated the effect of modeling--an adult reading from a child's text at a proficient rate--on children's oral reading. In all cases, Ss' correct and error rates for oral reading improved. Data indicated that modeling might be an appropriate intervention for children not yet proficient in oral reading. (Author/SBH)

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The Influence of Modeling on Children's Oral Reading Performance

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Running head: Modeling on Oral Reading

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Abstract

The influence of the classroom teacher reading orally before the child read was investigated. The teacher read at a proficient rate (approximately 100 words per minute) from the child's basal reader. Three learning disabled students participated in the study, and in all cases their correct and error rates for oral reading improved remarkably. The tactic selected--modeling--is both inexpensive in teacher time and cost and is easily scheduled. The data indicate that modeling might well be an appropriate intervention to select when children are not yet proficient in oral reading.

The Influence of Modeling on Children's Oral Reading Performance

A substantial amount of the elementary school day in the United States is spent on reading instruction: usually at least half an hour daily. As children advance, more academic subjects require reading; so, even more time is spent enhancing this most important skill. Unfortunately, despite all the time and effort spent helping children acquire and become proficient at reading, success does not come without specialized assistance for some.

Although a considerable amount of research has centered on the improvement of children's reading, guaranteed procedures are not available. A few remedial tactics, however, have been verified: reinforcement contingencies (Lovitt, Eaton, Kirkwood, & Pelander, 1971; phonics drill (Gray, Baker, & Stancyk, 1969), error word drill (Hansen & Lovitt, 1976a) and previewing (Lovitt, Schaff, & Sayre, 1970). There is still a need to identify easy to apply "natural" procedures, which will aid the remediation of reading deficits.

On visits to self-contained classes for learning disabled youngsters, this writer observed the traditional American three group approach to reading instruction. Although each group had a different reader, the same general procedures were used. The pupil to the left of the teacher started the process by reading the first paragraph, the next child read the next paragraph, and so on, until everyone in the circle had two opportunities to read. The only person at the reading table who did not read was the only person who was capable of reading proficiently; the teacher never took her turn to read. Would that added feature have influenced her students' reading performance?

A review of the literature revealed that the influence of teacher modeling proficient oral reading rates for students had not been investigated. Since this tactic is inexpensive, does not require much teacher preparation and is natural to all classrooms; it was felt that modeling was a tactic worth exploring. Therefore, two experiments, involving three children, were conducted to study in a preliminary fashion the influence of this tactic.

Experiment 1

The purpose of this first experiment was to explore the influence of modeling--an adult reading from the child's text at a proficient rate--on individual children's correct and error rates in oral reading.

Subjects and Settings

Two eight year old children, Pete and Nancy, participated in this experiment. At the time of the study, both were attending private day schools for learning disabled youngsters in Nashville, Tennessee: Hickory Valley School and Westminister Learning Center. Ms. Leesa Morrow and Ms. Susan Smith, Peabody College students, collected the data.

Procedures

Prior to this experiment, the children were placed in appropriate readers through the method described by Lovitt and Hansen (1976b). Pete was placed in a third grade basal reader and Nancy in a second grade basal text.

Throughout the experiment, each child was taken to a pre-specified reading area: an empty room for one and a secluded section of the classroom for the other. As the child read orally, the manager noted in her book the errors made by the child. Data were collected during fixed time periods (Pete for three minutes and Nancy

for two), but the children continued to read until they had completed a passage. At the conclusion of each session, the manager thanked the child for reading and s/he returned to the normal classroom routine; and the manager calculated, recorded and plotted the data. Correct rate (number of correctly read words divided by time) and error rate (number of incorrectly read words divided by time) scores were used as the daily data measures. Three experimental conditions were conducted for each child. Reliability measures were conducted for each; the corrected data are provided here. A description of the procedures used follows.

Baseline. Daily, during this condition the child was requested to read orally from the basal text. No instructions or feedback were provided the child.

Modeling. During this condition, prior to the child's reading the manager read for one minute from the child's text at a rate of approximately 100 words per minute. Afterwards the child read for the allotted time beginning from where the manager had stopped. Again, no instructions or feedback were provided the child regarding his or her reading performance.

Follow-up. Return to baseline conditions were established, and the manager no longer read out loud a selection from the child's text.

Results

A summary of both children's data is displayed in Table 1. Mean correct and error rates for each subject by experimental condition are indicated as well as percent of change scores[1] between conditions.

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[1] Percent of change scores were calculated by using the following formula:

$$\frac{\text{Mean}_2 - \text{Mean}_1}{\text{Mean}_1} \times 100 = \text{percent of change.}$$

Insert Table 1 about here

Baseline

The initial mean correct and error reading rates indicated that both children needed to improve. Nancy obtained a correct rate mean of 78.7 (scores ranged from 55.7 to 106) and an error rate mean of 7.3 (scores ranged from 6.3 to 11). Pete's correct rate mean was 51.5 (scores ranged from 47.5 to 53) and error rate mean was 5.5 (scores ranged from 3.5 to 8.0).

Modeling

During this intervention condition, Nancy achieved a correct rate mean of 92.0 (scores ranged from 77.0 to 112.3) and an error rate mean of 4.5 (scores ranged from 2.3 to 8.0). Pete's scores also indicated improvement; his correct mean was 57.3 (scores ranged from 52.0 to 64.0) and his error rate mean dropped to 2.0 (scores ranged from 0 to 4.0).

Follow-up

No interventions were scheduled during this condition and Nancy's correct and error rate means decreased to 89.0 (scores ranged from 85 to 94) and 2.8 (scores ranged from 2.3 to 3.7) respectively. Pete's correct rate mean increased, however, to 60.5 (scores ranged from 57.5 to 67.0), while his error rate mean decreased to 0.5 (scores ranged from 0 to 1.0).

Discussion

Although the girl's initial scores indicated that she was closer to achieving reading proficiency (100 words per minute) than the boy, both children needed to improve their reading abilities. As the data indicate, (see Table 1) when the teacher modeling intervention was in effect, both children's reading performance was influenced positively: their correct rates increased and errors rates decreased.

Pete's manager noted that his reading was more fluent during this phase and his reading was not as "choppy" or inconsistent. Nancy's mean during this intervention condition approximated proficiency (100 words a minute). This tactic accounted for substantial and desirable changes in these children's reading performance.

Experiment 2

This experiment differs only slightly from the first: the child's entry level was lower and additional conditions were conducted.

Subject and Setting

John, a 12-year old, was an exceptionally poor reader (as indicated by his baseline reading rates). According to his teacher he had begun reading orally only a year before the initiation of this experiment. John was attending a public school class for behaviorally disordered children at Cavert School, Nashville/ Davidson County Public School System. The manager of the study, Ms. Julie Dewberry, was a Peabody College student. During this time, she scheduled the individualized reading assignments for John and used a secluded area of the classroom for the reading sessions.

Procedures

At the beginning of the study, John was placed in a primer basal text, but entered the first grade edition part way through the experiment. John read only those pages which were part of complete stories. Title pages, poems and study exercises were not used for data collection purposes.

Each day correct and error rates were collected during a five minute oral reading session which always began with a new story. Five conditions were

conducted during this experiment; specific procedures are explained under the following condition headings.

Baseline. During this initial condition, John was simply requested to read orally for five minutes. He was given no instructions or feedback and was not corrected when he made errors. When the reading session was over, he was thanked and returned to the classroom routine.

Modeling. During this and all conditions in which the manager read from the child's text at a proficient rate, she read the first page of a new story at an approximate rate of 100 words per minute. When she finished, she requested John to read orally, starting from the place where she had stopped. As in the baseline phase, John was not corrected when he made an error, but simply allowed to continue reading. At the end of each session he was merely thanked for reading and returned to his class group activity.

Modeling plus error correction. During this condition, the teacher continued modeling as she had in the previous condition. The only change was the addition of a correction feature. As John read orally, the manager corrected him when he made an error and supplied him with the word when he did not know it.

Previewing plus modeling plus error correction. During this condition, instead of John reading the succeeding passage in his text after the manager read, he re-read that passage and continued reading from the story until his five minutes were over. The correction procedure used in the prior condition was continued.

Follow-up. During this short phase, baseline procedures were re-scheduled. No modeling, correction or feedback were provided the child.

Results

John's data are displayed in Figure 1 and summarized in Table 1.

Insert Figure 1 about here

Baseline

During this initial phase, John's performance indicated a need for remediation, as his correct rate mean, 12.4 was lower than his error rate mean, 13.6. His correct rate scores ranged from 9.0 to 15.0; and his error rate scores ranged from 12.0 to 15.0.

Modeling

During this first intervention condition, improvement was noted for both John's correct and error rates. His correct rate mean was 29.8 (scores ranged from 22.0 to 39.6), and his error rate mean was 10.9 (scores ranged from 8.4 to 13.6).

Modeling plus error correction

When the correction feature was added, John obtained a mean correct rate of 33.6 (scores ranged from 28.6 to 37.0) and a mean error rate of 9.4 (scores ranged from 8.0 to 13.2).

Previewing plus modeling plus error correction

When the modeling was discontinued and previewing substituted, John's mean correct rate increased to 51.2 (scores ranged from 40.2 to 63.0) and mean error rate decreased to 7.9 (scores ranged from 4.8 to 10.4).

Follow-up

During the return-to-baseline condition, a decrement in John's correct rate scores were noted. He obtained a mean correct rate of 32.0 (scores ranged from 30.2 to 33.2). His mean error rate also rose to 9.1 (scores ranged from 8.0 to 9.8).

Discussion

John's oral reading performance improved remarkably during Experiment 2. His initial performance levels indicated that John's reading abilities were exceptionally poor; he was functioning at the most rudimentary level. This is supported by his baseline data, for his error rate mean was higher than his correct rate mean. Considering John's age, all should agree that he was in desperate need of remedial help.

The first intervention scheduled for John was the tactic used in Experiment 1: modeling. The improvement noted during this six day intervention period was surprising. His correct rate mean was now higher than his error rate mean. His correct rate rose 17.4 words per minute, a 140% increase; while his error rate mean dropped by more than three words, a decrement of 20%. Such improvement was certainly not expected, particularly in this short period of time.

During the next condition, a correction feature was added to the modeling tactic. As the child read, the manager provided him with words he did not know or which were in error. This caused an increase (+13%) in his correct rate mean and a slight decrease in his error rate mean. The changes in John's reading performance during this five day condition were minimal, particularly when one considers the directionality of both measures: the correct rates were decelerating and the error rates were accelerating. What is important, however, is that his reading improvement, as compared to the baseline level, maintained.

During the condition which followed, the correction feature was retained but instead of the manager reading the first passage in the child's text and the child reading the succeeding passage, the child re-read the passage read by the manager. Again, a substantial amount of change in John's correct rate scores (an increase of 52%) was noted; his error rate means also decreased (by 16%). Both scores changed in a positive direction.

In the last condition, no interventions were in effect and the child merely read aloud from his reader, as he did during baseline. The child's correct rate and error rate scores returned to about the level of the modeling plus correction condition, but did not approach the poor levels of the baseline period. Even though proficiency was not achieved, to have this level of reading retained after only 16 days of intervention is remarkable.

General Discussion

During both experiments a modeling tactic was employed and positive changes in both correct and error rates were noted. The tactics used were inexpensive in teacher time (they did not require either additional instructional sessions or preparation time). For teachers already busy with planning and instructional activities, the application of techniques which are inexpensive is imperative. The ones investigated in these experiments might well be useful as general procedures to be incorporated into standard classroom routines, with additional, complex remedial help provided only when truly necessary.

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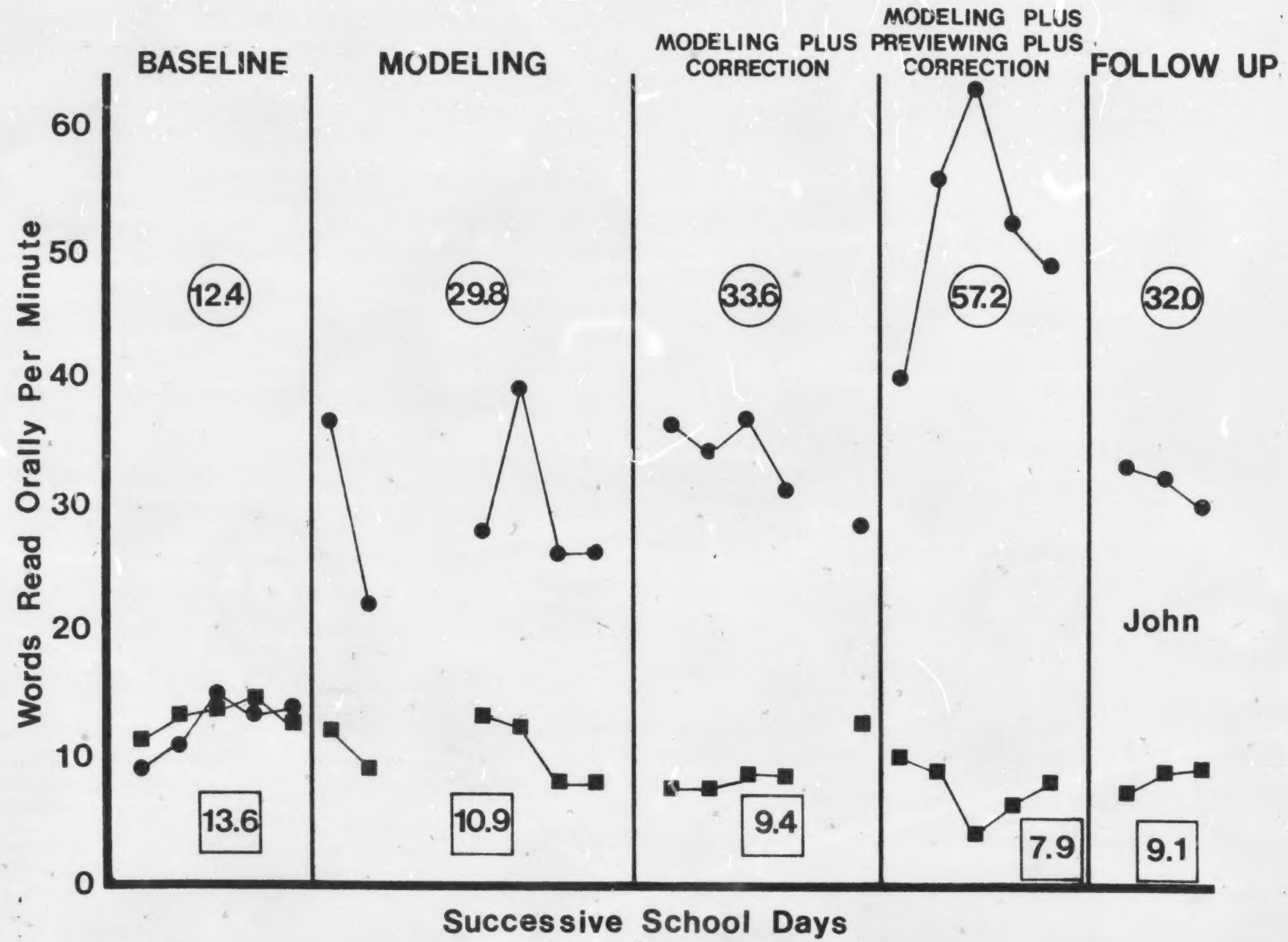
Figure Caption

Figure 1. John's data gathered during Experiment 2. Data points not connected within conditions indicate the student's absence from school.

Table 1

Summary Data for Both Experiments 1 and 2

Subjects	Baseline		Percent of Change		Modeling		Percent of Change		Modeling Plus Correction		Percent of Change		Previewing Plus Modeling Plus Correction		Percent of Change		Follow-up	
	C	E	C	E	C	E	C	E	C	E	C	E	C	E	C	E	C	E
Nancy	78.7	7.3	+17%	-38%	92.0	4.5	-	-	-	-	-	-	-	-	-3%	-38%	89.0	2.8
Pete	51.5	5.5	+11%	-64%	57.3	2.0	-	-	-	-	-	-	-	-	+6%	-75%	60.5	0.5
John	12.4	13.6	+140%	-20%	29.8	10.9	+13%	-14%	33.6	9.4	+52%	-16%	51.2	7.9	-38%	+15%	32.0	9.1


BASELINE
MODELING
MODELING PLUS CORRECTION
MODELING PLUS PREVIEWING PLUS CORRECTION
FOLLOW UP
Words Read Orally Per Minute
60
50
40
30
20
10
0
12.4
29.8
33.6
57.2
32.0
13.6
10.9
9.4
7.9
9.1
John
Successive School Days